

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
maintained by the
CALIFORNIA DEPARTMENT OF FISH AND GAME
and supported by the
CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP
Database Version 8.1 (2005)

B151 Black-bellied Plover *Pluvialis squatarola*
Family: Charadriidae Order: Charadriiformes Class: Aves

Written by: C. Swarth
Reviewed by: L. Mewaldt
Edited by: S. Granholm, R. Duke

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Common to abundant migrant and winter visitant in California from mid-July to mid-May on intertidal mudflats of estuarine habitats, on coastal lowland habitats, and in the Central Valley. Recorded nearly all year at Salton Sea. During spring (late March to mid-May) and fall (late July to mid-October) migration, uncommon to fairly common in the Great Basin. In southern California, rare migrant away from coast and Salton Sea. (Cogswell 1977, McCaskie et al. 1979, Garrett and Dunn 1981). Small numbers of non-breeders found in summer, especially in southern California. On the coast, forages primarily on intertidal mudflats, but also occurs on rocky intertidal and sandy-beach marine habitats, and on nearby pasture and wet meadow habitats. Away from the coast, occurs on plowed fields, short grasslands, wet meadows, and the shores of riverine, estuarine and lacustrine habitats.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Forages in typical plover fashion by running a short distance, then halting abruptly and pecking quickly at the surface of the substrate. Commonly feeds at night. Diet in estuarine mudflats during the non-breeding season includes polychaete worms, small mollusks, and crustaceans, and insects (Bent 1929). On San Francisco Bay, apparently takes many mud snails (Recher 1966). At high tide, feeding occurs upland in plowed field, pastures, and grasslands.

Cover: In estuarine habitats, requires undisturbed areas above high tide waters for roosting during the high tide period.

Reproduction: Nests in arctic regions on moist or dry tundra. Nest often placed on a slightly raised area or ridge (Palmer 1967, Harrison 1978). The nest is a shallow depression in the substrate, usually lined sparsely with fragments of moss or lichen (Harrison 1978).

Water: No additional data found.

Pattern: In nonbreeding season, most commonly found on coastal estuarine mudflats, but also occurs on plowed fields and other open areas inland.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity. Feeds at night in some areas.

Seasonal Movements/Migration: Southward migrants begin arriving in central coastal California in early to mid-July (Page et al. 1979), and, as with most shorebirds, adults precede juveniles (Palmer 1967). Spring migration mostly is over along the central coast by early May (Page et al. 1979). Arrives on the breeding grounds from early May to early June, depending

on location and weather. The breeding grounds are deserted by late August (Palmer 1967).

Home Range: Nesting density in Northwest Territories varied from 0.3 to 1.0 pairs /km² (0.39 mi²) on Denver Island (Hussell and Page 1976), to 1.2 to 2.3 pairs /km² (0.39 mi²) on Jenny Lind Island (Parmelee et al. 1967). Drury (1961) reported 4 nests in an area of less than 0.5 km² (0.2 mi²) on Bylot Island, Northwest Territories.

Territory: Maintains feeding territory in nonbreeding season (Myers et al. 1979). Apparently defends nesting territory of unknown size.

Reproduction: Breeding season begins mid-May to mid-June, depending on latitude. On Denver Island, Northwest Territories, most clutches were initiated in the last 10 days of June (Hussell and Page 1976). Apparently monogamous, and generally a solitary nester. Average clutch size 4 eggs, and the incubation period lasts 26-27 days. One brood is produced in a season. Both sexes incubate. Precocial young remain inactive in the nest for 10-12 hr after hatching. Both parents accompany chicks away from the nest site, but the female often departs before the young can fly. Chicks are able to fly at about 23 days (Hussell and Page 1976). Probably does not breed until second yr (Johnsgard 1981).

Niche: Often aggressive on wintering grounds. Known in Europe as grey plover (Ehrlich et al. 1988).

REFERENCES

- Bent, A. C. 1929. Life histories of North American shorebirds. Part 2. U.S. Natl. Mus. Bull. 146. 412pp.
- Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp.
- Drury, W. H., Jr. 1961. Studies of the breeding biology of horned lark, water pipit, Lapland longspur, and snow bunting on Bylot Island, Northwest Territories. Canada. Bird-Banding 32:1-46.
- Ehrlich, P. R., D. S. Dobkin, and D. Wheye. 1988. The birder's handbook. Simon and Schuster, New York. 785pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Harrison, C. 1978. A field guide to the nests, eggs and nestlings of North American birds. W. Collins Sons and Co., Cleveland, OH. 416pp.
- Harrison, C. J. O., ed. 1978. Bird families of the world. Harry N. Abrams, Inc., New York. 264pp.
- Hussell, D. J. T., and G. W. Page. 1976. Observations on the breeding biology of black-bellied plovers on Devon Island, N. W. T., Canada. Wilson Bull. 88:632-653.
- Johnsgard, P. A. 1981. The plovers, sandpipers, and snipes of the world. Univ. Nebraska Press, Lincoln. 493pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- Myers, J. P., P. G. Connors, and F. A. Pitelka. 1979. Territory size in wintering sanderlings: the effects of prey abundance and intruder density. Auk 96:551-561.
- Page, G. W., L. E. Stenzel, and C. M. Wolfe. 1979. Aspects of the occurrence of shorebirds on a central California estuary. Pages 15-32 in F. A. Pitelka, ed. Shorebirds in marine environments. Studies in Avian Biol. No. 2. Cooper Ornithol. Soc. Lawrence, KA. 261pp.
- Palmer, R. S. 1967. Species accounts. Pages 143-267 in G. D. Stout, ed. The shorebirds of North America. Viking Press, New York. 270pp.
- Parmelee, D. F., H. A. Stephens, and R. H. Schmidt. 1967. The birds of southeastern Victoria Island and adjacent small islands. Natl. Mus. Ca., Ottawa. Bull. No. 222. 229pp.
- Recher, H. F. 1966. Some aspects of the ecology of migrant shorebirds. Ecology 47:393-407. reater sandhill cranes. Ph.D. Thesis, Univ. Idaho, Moscow. 168pp.

Species notes are designed to support the species-habitat relationships database models in the California Wildlife Habitat Relationships (CWHR) System and are also published within the current version of the CWHR software. Please cite as: California Department of Fish and Game. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships version 8.1 personal computer program. Sacramento, California.